## IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

THE COMMISSIONER OF PATENTS AND TRADEMARKS
Alexandria VA 22313-140

In re the application of: Peng Zhou et al.
For: RECONFIGURABLE MODULAR MICROFLUIDIC SYSTEM AND METHOD OF FABRICATION

Filed:
Application No.:
Art Unit:
Attorney Docket No.: KNX-19

## INFORMATION DISCLOSURE STATEMENT

### List of Sections Forming Part of This Information Disclosure Statement

The following sections are being submitted for this information Disclosure Statement

1. [X] Preliminary Statements
2. [X] FORM PTO - 1449 (Modified)
3. ☐ Statement As To Information Material To Examination Not Found in Patents or Publications
4. ☐ Identification of Prior Application In Which Listed Information Was Already Cited and For Which No Copies Are Submitted Or Need Be Submitted.
5. ☐ Cumulative patents or Publications
6. [X] Copies of Listed Information Items Accompanying This Statement
7. ☐ Concise Explanation of Non-English Language Listed Information Items.
8. ☐ Translation(s) of Non-English Language Documents
9. ☐ Certification under MPEP 609(e)
10. [X] Identification of Person(s) Making This Information Disclosure Statement

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**CERTIFICATE OF MAILING**

[X] Express Mail No: EV089885478US Date: March 23, 2004

I hereby certify that this correspondence is being deposited with the United States Postal Service, return receipt requested in an envelope addressed to Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this date.

Justin Wood

**Section 1. Preliminary statements**

Applicant submits herewith patents, publications or other information of which he is aware, which he believes may be material to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 CFR 1.56.

The filing of this information disclosure statement shall not be construed as a representation that a search has been made (37 CFR 1.56(g)), an admission that the information cited is, or is considered to be, material to patentability or that no other material information exists.

The filing of this information disclosure statement shall not be construed as an admission against interest in any manner. Notice of January 9, 1992, 1135 O.G. 13-25, at 25.

**Section 2. Form PTO - 1449 (Modified) (SEE ATTACHMENT)**

*EXAMINER: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw a line through citation if not in conformance or not considered. Include a copy of this form with the next communication to applicant.

**Section 3. Statement As To Information Material For Examination Not Found in Patents or Publications (Information not listed in PTO 1449)**

**Section 4. Identification of Prior Application in Which Listed Information Was Already Cited and For Which No Copies Are Submitted Or Need Be Submitted**

**Section 5. Cumulative Patents or Publications**

☐ Item(s)
are cumulative of the following patents or publication listed on Form PTO 1449 (modified):

In accordance with 37 CFR 1.98(c) a copy of is being submitted with this information disclosure statement.

**Section 6. Copies of Listed Information Items Accompanying This Statement**

Legible copies of all items listed accompany this information statement.

☐ Exception(s) to above:

☐ Items in prior application from which an earlier filing date is claimed for this application as identified in Section 4.
☐ Cumulative patents or publications identified in Section 5.

**Section 7. Concise Explanation of Non-English Language Listed Information Items**

**Section 8. Translation(s) of Non-English Language Documents**

☐ Submitted herewith is an English translation of the following foreign language patents, publications or information or of those portions of those patents, publications or information considered to be material:
☐ No English language translations of the foreign language patents, publications or information or parts thereof are readily available, except for those listed above.
☐ The following foreign language documents submitted are believed to be the equivalent or

substantial equivalent of the English language documents identified below, which are also submitted herewith.

**Section 9. Certification under Rule 1.97**

☐ The undersigned hereby certifies that:

a. This Statement is being filed after the latest of (1) three months after the filing date of a national application; (2) three months after the date of entry of the national stage as set forth in w 1.491 in an international application; (3) the mailing date of a first Office action on the merits.

b. The fee set forth in §1.17(p)

☐ Is being paid with this Information Disclosure Statement

☐ Is not due because:

☐ (1) Each item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the statement, or

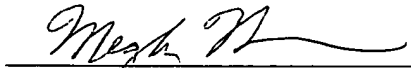
☐ (2) No item of information contained in the information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the person signing the certification after making reasonable inquiry, was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of the statement.

**Section 10. IDENTIFICATION OF PERSON(S) MAKING THIS INFORMATION DISCLOSURE STATEMENT**

The person making this statement is

(a) ☐ the inventor(s) who signs below

(b) [X] the attorney who signs below on the basis of:
☐ the information supplied by the inventor(s)
☐ an individual associated with the filing and prosecution of this application (37 CFR 1.56(c)).
[X] the information in the attorney's file



Meghan Van Leeuwen, Registration No. 45,612
BROWN & MICHAELS, PC
400 M&T Bank Building, 118 N. Tioga Street
Ithaca, New York 14850-4343
Voice: (607) 256-2000 Fax: (607) 256-3628
e-mail: bpm@bpmlegal.com
Customer number: 020808

Date: March 23 2004

Section 2. Form PTO - 1449 (Modified) (ATTACHMENT)

| FORM PTO-1449 U.S. DEPT. OF COMMERCE (Modified) PATENT AND TRADEMARK OFFICE | ATTY DOCKET NO. KNX-19 | SERIAL NO. |
|---|---|---|
| | APPLICANT Peng Zhou et al. | |
| INFORMATION DISCLOSURE STATEMENT BY APPLICANT | FILING DATE | GROUP |

**U.S. PATENT DOCUMENTS**

| Exam Initial | | DOCUMENT NUMBER | DATE | PATENTEE | CLASS | SUB | FILING DATE IF APPROPR |
|---|---|---|---|---|---|---|---|
| | | 3,548,849 | 1970 | Purcell et al. | 137 | 81.5 | |
| | | 4,080,752 | 1978 | Burge | 46 | 25 | |
| | | 5,580,523 | 1996 | Bard et al. | 422 | 50 | |
| | | 5,624,638 | 1997 | Negrotti | 422 | 61 | |
| | | 5,640,995 | 1997 | Packard et al. | 137 | 597 | |
| | | 5,846,396 | 1998 | Zanzucchi et al. | 204 | 601 | |
| | | 5,955,028 | 1999 | Chow | 422 | 63 | |
| | | 6,033,544 | 2000 | Demers et al. | 204 | 450 | |
| | | 6,086,740 | 2000 | Kennedy | 204 | 601 | |
| | | 6,284,113 | 2001 | Bjornson et al. | 204 | 453 | |
| | | 6,358,387 | 2002 | Kopf-Sill et al. | 204 | 603 | |
| | | 2002/0028504 | 2002 | MacCaskill et al. | 435 | 289.1 | |
| | | 2002/0124896 | 2002 | O'Connor et al. | 137 | 833 | |
| | | 2002/143437 | 2002 | Karthik, et al | 700 | 266 | |
| | | 2002/0187074 | 2002 | O'Connor et al. | 422 | 82.5 | |
| | | 2002/0192112 | 2002 | Chow | 422 | 63 | |
| | | 2003/0012697 | 2003 | Hahn et al. | 422 | 99 | |
| | | 2003/0021725 | 2003 | Unno et al. | 422 | 50 | |

**FOREIGN PATENT OR PUBLISHED FOREIGN PATENT APPLICATION**

| Exam Initial | | DOCUMENT NUMBER | DATE | COUNTRY | CLASS | SUB | TRANSLATION YES \| NO |
|---|---|---|---|---|---|---|---|
| | | WO02/30560 | 04/18/2002 | PCT | B01J | 19/00 | |
| | | WO01/70400 | 09/27/2001 | PCT | B01L | 3/00 | |
| | | EP1203954 | 05/08/2002 | EPO | G01N | 30/60 | |

**OTHER PRIOR ART**

| Exam Initial | | Author, Title, Date, Pertinent Pages, Etc |
|---|---|---|
| | | The Optimal Configuration of Mechatronic Products with Integrated Microsystem Technology Components. Zöppig, et al Limenau Technical University, Drive Engineering Group (2000) |
| | | CAT Expands MEMS Packaging Cababilities. Center for Automation Technologies at RPI - Web page (2002) http://www.cat.rpi.edu/MEMS_packaging.htm |
| | | A New Microfluidic Paradigm for Biological and Biochemical Research. http://faculty.washington.edu/yagerp/microfluidicstutorial/newparadigm/newparadigm.htm |

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|---|---|---|
| | | Paul Yager, PhD - Dept. Bioengineering, U. Washington<br>A part of "Microfluidics-A Highly Biased Primer" (2001) |
| | | LioniX "Modular Lab/Process on a Chip<br>http://www.lionixbv.nl/pdf/news_flyers_microfluidics.pdf |
| | | Packaging Technology for Miniature IVD Instrumentation.<br>Gonzalez, Pan, Collins & Smith - *Medical Device & Diagnostic Industry* (April 1998)<br>http://www.devicelink.com/mddi/archive/98/04/010.html |
| | | A World-to-Chip Socket for Microfluidic Prototype Development<br>Yang Z and Maeda R (2002) *Electrophoresis* 23 (20) 3474-3478 |

| EXAMINER | DATE CONSIDERED |
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